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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/628,300	07/28/2003	Joseph G. Vazach	03AB043	3489

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ROCKWELL AUTOMATION, INC./BF
1201 SOUTH SECOND STREET
MILWAUKEE, WI 53204

EXAMINER

LEJA, RONALD W

ART UNIT	PAPER NUMBER
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2836

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/628,300

Applicant(s)

VAZACH ET AL.

Examiner

Ronald W. Leja

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/16/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-8, 10, 11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hallenbeck (3,614,539) in view of Kogure (5,835,534), Giannini et al. (7,075,414) and Rahamim et al. (6,647,101).

Hallenbeck discloses (see Figs 1, 3 and 5) an in-line isolation barrier having a housing with opposing terminals and indicia (for Claims 1, 13, 14). The barrier includes a fusible link (F), voltage sensitive conductor (Z1, Z2) and current limiting resistor (R1) (for Claims 2, 3), but does not appear to show high-speed abilities, clear impedance matching and bi-polar voltage sensitive. Hallenbeck discusses the need for addressing impedance of the barrier with respect to the safe and hazardous areas so as to prevent a problem in the worst case scenario (see Col. 6, lines 10-20 and Col. 7, lines 38-65). Therefore it would have been obvious to adjust/match the impedance for

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the most protection and/or communication abilities, depending upon the specific application-at-hand, thereby leading to a more reliable end-product. In addition, Kogure teaches a safety barrier wherein matching circuits (64, 7) so as to compensate for the frequency band of the connected field equipment. As far as high speed, this again would have been obvious as a matter of meeting the particular application-at-hand. Giannini et al. teach megahertz serial digital data communication. Therefore, it would have been obvious to apply the Hallenbeck barrier to those applications involving high frequency and high speed data transmissions, utilizing matching circuitry of Kogure, and thus, gain in increased design applications and sales.

Addressing the bi-polar aspect of the voltage sensitive conductor of Claim 1, as well as Claims 4-8 and 15, Hallenbeck is concerned with a single line referenced to ground, and thus, single direction zener use (two are required for the case if one should fail).

However, Giannini et al. teach in Column 21, lines 34-53, that surge protection can be added to the design wherein a fuse is placed serially in the line and a pair of oppositely disposed zener diodes are connected between the lines. Therefore, it is the opinion of the Examiner that it would have been obvious to use as many zener diodes and connected in any direction deemed necessary so as to ensure that the anticipated worst-case scenario for the particular application-at-hand would be covered for excess voltages, thereby, helping to ensure safety for equipment and personnel and prevent losses. As far as use of a DC blocking element in series between the first and second terminal sets, Rahamim et al. teach Megahertz communications wherein a capacitor is utilized as a DC blocking element (see Fig.s 3A-3C). It would have been obvious to utilize the DC blocking elements as fairly taught by Rahamim et al. as the elements provide the appropriate isolation and do so while saving space and weight as opposed

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to prior art transformers. It would have been obvious to one having ordinary skill in the art to apply the protective barrier teachings of the combined References above to as many terminal sets requiring the protection (for Claim 15), and thereby, ensure hazard-free communication wherever deemed necessary.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hallenbeck in view of Kogure, Giannini et al. and Rahamim et al. as applied to Claim 1 above, and further in view of Flasz et al. (6,980,174).

Flasz et al. teach the use of an intrinsic safety barrier wherein application involves high frequency data transmissions, thus requiring coaxial and BNC connectors. It would have been obvious to utilize the well-known BNC-type coaxial connectors as a means to allow for quick set-up and quick disconnect abilities to the end-product.


Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald W. Leja whose telephone number is (571)272-2053. The examiner can normally be reached on Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)272-2800. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ronald W Leja
Primary Examiner
Art Unit 2836

10/15/06

rwl
October 15, 2006